

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 4 with "As shown in FIG. 1..." and ending on page 5 with "...consideration of a vehicle condition." with the following amended paragraph.

As shown in FIG. 1, the hydraulic pressure control mechanism 80 includes [[an]] a fluid pump 82 which pumps up hydraulic fluid from a strainer 90 and functions as a origin of hydraulic pressure, a regulator valve 83 regulating the hydraulic pressure generated at the fluid pump 82, a modulator valve 84 for depressurization of the hydraulic pressure, a linear linier solenoid valve 85 regulating the hydraulic pressure from the modulator valve 84, a control valve 86 regulating line pressure provided from the regulator valve 83 based on the hydraulic pressure regulated by the linear solenoid valve 85 and providing the hydraulic fluid to the hydraulic pressure chamber 13, and a shift valve 87 changing flow path of the hydraulic fluid from the control valve 86. To make flow path resistance constant, a flow path from the regulator valve 83 to the control valve 86 and a flow path from the control valve 86 to the hydraulic pressure chamber 13 has a cross sectional area exceeding predetermined cross sectional area, and orifices 95, 96 are provided. An electric control unit (ECU) 81 controls supply of hydraulic pressure to the clutch device 11 and another plurality of clutch device (not shown) to make it required shift condition of an automatic transmission with consideration of a vehicle condition.

Please add the following paragraph immediately following the paragraph ending on page 6 of the present application with "... between the spool valve 21 and the valve body."

As shown in FIGS. 2, 3, 4a-c and 9, the hydraulic pressure that controls the physical relationship between the spool valve and the valve body is comprised of a pressure in a first conduit that is between the linear solenoid valve 85 and the spool valve 21, and a feedback conduit FB that fluidly connects to the supply port 21c. The hydraulic pressure in the first conduit between the solenoid valve 85 and the spool valve 21 provides a force against the spool valve in a first direction, e.g., along a sliding axis, and the hydraulic pressure in the FB conduit provides force against the spool valve 21 in a second direction that is substantially opposite to the first direction.

Please replace the paragraph on page 6 beginning with "Next, shape of recesses..." with the following amended paragraph.

Next, shape of recesses 21e1, 21e2, 21f1, 21f2, 21i, and 21j will be explained. Recesses are provided at each land portion of corresponding position to each port. As shown in FIG. 3, the recess 21e1 is provided at lower edge portion 21h of the land 21a. Also, the recess 21f1 is provided at upper edge portion 21g of the land 21b. Additionally, the recess 21i is provided at lower edge portion 21h of the land 21a, and the recess 21j is provided at upper edge portion 21g of the land 21b (shown in FIG. 2). Since the recesses 21e1, 21e2, 21f1, 21f2, 21i, and 21j are formed with same method in the present embodiment, the forming method is explained for the recess 21f1 as a representative of recesses 21e1, 21e2, 21f2, 21i, and 21j.

Please replace the paragraph on page 6 beginning with "the shape of the recess..." with the following amended paragraph.

The shape of the recess 21f1 is determined based on following principle explained.

Please replace the paragraph on page 7 beginning with "In the first embodiment..." and ending with "...portion 21g of the land 21." with the following amended paragraph.

In the first embodiment of the present invention, opening width of the recess 21f1 is formed with changing depending on its location. The opening width of the recess 21f1 is the widest at the upper edge portion 21g of the land 21b, and it turns into narrow concurrent with the position getting down from upper edge portion 21g of the land 21b [[21]].

Please replace the paragraph on page 7 beginning with "The opening width of..." and ending with "...the inverse function." with the following amended paragraph.

The opening width of the recess 21f1 is set by following method as an example. First, relationship between flow volume Q and orifice area A is experimentally obtained as shown in FIG. 6. Next, a polynomial approximately function is calculated using regression analysis of data, and an inverse function is calculated from the polynomial approximated function. Finally, shape of the recess is determined by applying the inverse function.

Please replace the paragraph on page 7 beginning with "Machining method of the..." and ending with "...rotating T-slot cutter 51." with the following amended paragraph.

Machining method of the recess 21f₁ is explained referring to FIG. 7. For example, a commercial T-slot cutter 50 may be used to machine the recess having given shape. Both sides of cutting tooth of the commercial T-slot cutter 50 are ground to make a practical T-slot cutter 51 with corresponding shape of the recess 21f₁. The recess 21f₁ is cut using rotating T-slot cutter 51.

Please replace the paragraph on page 8 beginning with "When the spool valve 21..." and ending with "...the line port 20b." with the following amended paragraph.

When the spool valve 21 slides from the state of the leak region to downward in FIG. 4, as shown in FIG. 4b, the spool valve 21 slides with that the recess 21f₁ passes over the line port 20b. This situation is referred to as recess region (shown in FIG. 5). In the recess region, the hydraulic fluid flows from the line port 20b to the valve body 20 through the opening area S of the line port 20b.

Please replace the paragraph on page 9 beginning with "As described above..." and ending with "...stroke of the spool valve 21." with the following amended paragraph.

As described above, the hydraulic fluid flows from the line port 20b to the valve body 20 through the opening area S of the line port 20b in the recess region. In the first embodiment of the present invention, since the recess 21f₁ is provided at

the edge portion 21g of the land 21b, rapid increase in opening area S can be prevented with changing from the leak region to the recess region. Thus, the flow volume of the hydraulic fluid can be smoothly changed with stroke of the spool valve 21.